

between the stigma and the barren stamen, through which opening the insect is obliged to obtain the honey. The glandular hairs of the pedicels are absent some distance below the blossom thus offering no interference to the alighting insect. When the stamens uncoil and the pollen ripens the style becomes reflexed and the somewhat rigid stamens are forced against the insect visitor, the weight of the latter, who is always obliged to work from below, causing the blossom to sag greatly.

EDWARD W. BERRY.

PASSAIC, N. J.,
December 2, 1902.

REVIEWS

A recent Monograph of *Campanula rotundifolia* and its Allies

A monograph of *Campanula rotundifolia* and its allies has recently been issued from the University of Vienna by J. Witasek. It appears under the title "Ein Beitrag zur Kenntnis der Gattung *Campanula*."* It treats only of the species belonging to the *C. rotundifolia* group. This group is divided into 3 series, 15 superspecies and 32 subspecies. *C. rotundifolia* in a broad sense, *i. e.*, taken as a superspecies, contains 11 subspecies. Of these *C. rotundifolia* in limited sense is distributed over almost the whole of Europe and northern Asia and also credited to the southwestern United States and Mexico. The other European species are local or of very limited range, one from France and Switzerland, one from Switzerland and six from Austria, the Turkish peninsula and Italy. North America is credited with six species: *C. rotundifolia* L., *C. intercedens* Witasek, *C. petiolata* DC., *C. dubia* DC., *C. Giesekiana* Vest, *C. heterodoxa* Vest.

Campanula intercedens Witasek is our so-called *C. rotundifolia* of the eastern states. Witasek points out the following characters to distinguish it from *C. rotundifolia* of Europe: The tall habit, the long one-flowered almost erect branches of the inflorescence, the lighter color of the plant, thinner leaves and especially the hairiness of the stem. In *C. rotundifolia*, if hairy at all, the hairs are scattered all around the lower portion of the stem, while in the American plant they are confined to definite decur-

* Abh. K. K. Zoöl.-Bot. Gesellsch. Wien, 1³: 1-106. 1902.

rent lines. The author could have added another striking difference in the basal leaves, but these were probably unknown, as they are most commonly lacking in herbarium specimens. In *C. rotundifolia* the basal leaves are small, thick, crenate-dentate and with shallow basal sinuses. In *C. intercedens* they are usually large, thin, with large sharp teeth and deep rounded basal sinuses. *C. intercedens* inhabits usually rocky places, while the European *C. rotundifolia* is a meadow plant. While the former is the common plant of the eastern states and Witasek does not cite a single specimen of *C. rotundifolia* from that region, there are some specimens indicating the existence of the latter in the East, probably as an introduced plant. In the Columbia University herbarium there is one from Canaan, Conn., collected by W. H. Leggett, which I must refer to *C. rotundifolia*, and another from Milford, Pa., by Dr. Britton, which, also, probably belongs with it.

Campanula petiolata DC. is the common plant of the Rocky Mountain region. It is nearer the European *C. rotundifolia* than the preceding, and if hairy on the stem at all, the hairiness is not confined to lines, but extends all around. It is a stricter plant than *C. rotundifolia*, with thicker leaves, of which the uppermost are almost erect and the lower blunt, of a lighter hue and with more unequal calyx lobes. The basal leaves are more inclined to be ovate, rather than round-cordate.

The range of *Campanula rotundifolia* in America, Witasek limits to Mexico and New Mexico, with the addition of one locality in Colorado and one in Idaho. It is strange if *C. rotundifolia*, a native of the wet meadows of northern Europe and Asia and the mountains of South Europe, should here be limited to the Texano-Mexican region. The few New Mexican and Mexican specimens that I have at hand, I admit, resemble much the European plant in general habit and hairiness, but it is taller, more slender and strict. In all, the basal leaves are lacking. Maybe they would furnish good characters to distinguish the Texano-Mexican plant. In the herbarium of the New York Botanical Garden there is a duplicate of the number cited from Idaho, viz., *Sandberg, MacDougal & Heller, 337*. This is nothing but *C. petio-*

lata. Our specimens are not even hairy, which the Berlin herbarium specimen, which Witasek saw, evidently is. *C. petiolata* is generally perfectly glabrous. In the Rockies, especially in Colorado, are found forms densely pubescent on the lower part of the stem and less so on the leaves. Otherwise I have found no character to separate this form from the typical *C. petiolata*. Maybe the author of the monograph has confused under the so-called American *C. rotundifolia* the hairy form of *C. petiolata* and an undescribed species from Mexico and New Mexico.

Campanula dubia DC. is the same as *C. Scheuchzeri* and *C. rotundifolia* var. *arctica* of Gray's Synoptical Flora, at least in part. It is more closely related to *C. rotundifolia* than to *C. intercedens*. It is usually one-flowered with erect flower buds, with thin broad linear to oblanceolate stem-leaves, and round or rarely reniform basal leaves, large flowers and long sepals. It grows from Newfoundland to the White Mountains of New Hampshire.

Campanula Giesekiana Vest has gone under the name of *C. Scheuchzeri*, *C. rotundifolia* var. *linifolia* and var. *arctica*, and has not been separated from the preceding, but is distinguished from that species as well as from the others of the *C. rotundifolia* group by the short and broad hypanthium, which in flower is much broader than high. It is usually a low plant, densely leafy below and naked above, usually one-flowered. The lower stem-leaves are often spatulate and obtuse. *C. Giesekiana* is an arctic plant growing in Europe and Asia, as well as in America, where it has been collected in Greenland, Labrador and on the islands of the Baffin's Bay region.

Campanula heterodoxa Vest is, according to Witasek, the same as *C. rotundifolia Alaskana* of Gray's Synoptical Flora, and is a native of Alaska and Eastern Asia. It is a tall plant with large flowers and resembling a luxuriant *C. rotundifolia*, but is characterized by its long spreading or reflexed calyx-lobes. To me it seems to consist of two forms, one with broad oblanceolate lower stem-leaves, the other with all stem-leaves narrowly linear and flaccid.

A few words may be said about the monograph in general. The paper, type and printing are excellent. A full synonymy

is given under each species and the references are given in an unusually clear way. The diagnosis of each species in Latin is long enough to give a good description and short enough so as not to be cumbersome. The general notes in German are full of valuable information, and presented in a concise and clear way. Even the American species are treated in a way very unlike the unsatisfactory one in which Europeans usually monograph American plants. If this monograph is compared with that of *Oenothera* by Léveillé, its superiority in quality is quite evident.

After I had glanced over the 106 pages of the text and studied what was of most interest to me, especially all that related to American botany, I turned to the preface and here awaited me the greatest surprise. The author is a woman. On the title page the author's name is given as J. Witasek without any title whatever, and in the text the personal element is as it ought to be so eliminated that there is no indication of the gentler sex. Only the first line of the preface contains the word "Verfasserin," followed by a few "sie" and "ihre." Not that I believe a woman incapable of a good piece of work, far from it; but in Europe there are but few women that receive a university education and besides their education is generally very unlike that of men. Therefore, the monograph indeed is a credit to both the author and her sex, as well as to the university where the work was done.

P. A. RYDBERG.

PROCEEDINGS OF THE CLUB

TUESDAY, NOVEMBER 11, 1902

The meeting was held at the College of Pharmacy; thirteen persons present; Dr. Rusby in the chair.

The scientific program of the evening consisted of a paper by Dr. L. M. Underwood on "The Gold and Silver Ferns." Dr. Underwood said that characters based upon position and form of sori and indusia have perhaps been emphasized too much in classification; in some species the indusium may be developed or may be wanting on the same plant. There is now a tendency to return to the recognition of the fibro-vascular system as an